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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,020	08/08/2000	Jun-Woo Lee	51876.P194	6633

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Blakely Sokoloff Taylor & Zafman
12400 Wilshire Blvd 7th Floor
Los Angeles, CA 90025-1026

EXAMINER	
NGUYEN, TU X	
ART UNIT	PAPER NUMBER
2684	13

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/622,020	LEE ET AL.	
	Examiner	Art Unit	
	Tu X Nguyen	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2004* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,9-12 and 14-27* is/are pending in the application.

4a) Of the above claim(s) *4,8 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,9-12 and 14-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicant's arguments with respect to claims 1, 6, 10, 15, 19 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 6, 10, 15, 19, and 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is not support by either a credible asserted utility or a well established utility.

Regarding independent claims 1, 6, 10, 15, 19, and 26-27, the original specification filed 09/09/00 does not provide an enabling disclosure as to how the "a speed of a radio wave is supposed to equal to the speed of the light". It is well known that electrical signals, depending upon the electromagnetic transmission characteristics of the transmission medium, typically propagate on a communications channel at a speed in the range of 0.6 to 0.9 of the speed of light, the speed of light being estimated to be about 186,000 miles per second, the estimated speed of light is translated to and electromagnetic propagation speed of approximately one foot per nanosecond. Accordingly, it should be clear that as a signal propagates or travels down a communications channel, the time delay as the signal travels from one station to another station is commonly called the propagation delay. Hence, the electrical length of a communications path is relatively long, the propagation delay may be relatively long.

The specification does not describe frequency spectrum that made possible the radio station transmitting radio wave equivalent to velocity of light. Additionally, it is known that the theoretical speed of a signal in a conductor is equal to the light velocity divided by the dielectric constant of the material. A rate of one gigabaud translated into the presence of a small electron packet, representing one data bit, approximately every 20 cm along the conductor. This distance is reduced to about 5 cm for a rate of 4 gigabaud. Therefore, it is important that these electron packets not be disturbed by the passage of other packets flowing through adjacent conductors. This interference can translate into a reduction of the electron packet or a dispersion of the packet, as well as into small parasitical electron packets interposed between the packets of the signal. Under these conditions, the noise corresponding to the parasitic electrons becomes substantial relative to the desired signal. The extend of the noise is further increase due to the fact that the leading edges of the desired signal can be attenuated as a result of a reduction or a dispersion of the corresponding electron packets. Thus, it becomes very difficult to restore the signal received. Moreover, if the signal is subject to one or more reflections due to interfaces produced by insufficient impedance matching, electrons will separate from each packet and constitute parasitic groups, rendering correct transmission of the signal impossible.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Regarding claims 26 and 27, the phrase "a computer readable media storing a method" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, 5-7, 9-12, 14-20, 22 and 24-27, rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Scott in view of Schneider (US Patent 5,781,541).

As to claims 1, 6, 10, 15, 18-19, 24, Scott discloses a method for expanding cell coverage in mobile communication system comprising the steps of:

a) shifting a preamble access window by advancing a transmission signal by a first delay time in order to acquire a first call access signal from a mobile station at a remote distance (see col.4 line 34 through col.5 line 30). The examiner interprets "advance or retard timing" corresponds to "shifting"; and

b) delaying a second call access signal from a mobile station at a short distance by a second delay time in order to acquire the second call access signal (see col.38 lines 11-50).

Scott fails to disclose the transmission time of the transmission signal is advanced by delaying the transmission signal when being PN modulated.

Schneider disclose the transmission time of the transmission signal is advanced by delaying the transmission signal when being PN modulated (see col.6 line 45 through col.11 line 27). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Scott with the above teaching of Schneider in order to provide improved cell coverage without the detrimental effects of multipath fading.

As to claim 2, the modified Scott discloses step a) includes the step of expanding a length of the preamble access window to a maximum value by adjusting a length of chips included in the transmission signal (see Scott, col.23 lines 1-37).

As to claims 3, 7, 16 and 22, the modified Scott discloses step b) includes the steps of:

Determining whether the second call access signal from the mobile station is acquired by the preamble access window (see Scott, col.38 lines 11-30); and

Accessing the second call access signal to the preamble access window by delaying the second call access signal if the second call access signal is not acquired (see Scott, col.38 lines 30-50).

As to claims 5, 9, 14, the modified Scott discloses the second call access signal is delayed by a feedback delay (see Scott, col.9 lines 25-40). The examiner interprets "guard time" corresponds to "feedback delay".

As to claims 11, 17, the modified Scott discloses everything as to claim 1 above. More specifically, Scott discloses " Pseudo noise signal" (see Scott, col.25 lines 1-5).

As to claim 12, the modified Scott discloses everything as to claim 10 above. More specifically, the modified Scott discloses "demodulating the delayed received signal and restoring the call access signal" (see Scott, col.17 lines 51-64 and col.18 lines 37-51).

As to claim 20, the modified Scott discloses "feedback delay" and "length of the preamble access window" renders obvious all limitations over claim rejections 2 and 5.

As to claim 25, the modified Scott discloses the second call access signal is substantially delayed for 20us by the feedback delay (see Scott, col.8 lines 11-20).

As to claims 26-27, the modified Scott discloses everything as to claim 1 above. More specifically, Scott discloses "expanding a length of a current preamble access window to a maximum value (see Scott, col.23 lines 1-37).

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott, in view of Schneider and further in view of Jiang et al. (US Patent 6,212,405).

As to claim 21, Scott and Schneider fail to disclose the cell radius is expanded 45KM or more.

Jiang et al. dislose the cell radius is expanded more than 45KM (see col.6 lines 32-51). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Scott and Schneider with the above teaching of Jiang et al. in order to provide an extended cell size coverage for a base station that will cause signals transmitted by mobile station within their respective cells to be received within the confines of search windows associated with round trip delay timing protocols.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is (703) 305-3427. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7749.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 2600 Customer Service Office at (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

TN

June 23, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER